RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number:	1016	23.	176A	
Source:		1-1	516	
Date Processed by STIC:		13	106	
•				

ENTERED



IFW16

RAW SEQUENCE LISTING DATE: 01/13/2006
PATENT APPLICATION: US/10/623,176A TIME: 08:47:49

Input Set : A:\2183-6047 seq list.txt
Output Set: N:\CRF4\01132006\J623176A.raw

```
3 <110> APPLICANT: Goulmy, Els A.J.M.
             Hunt, Donald F.
             Engelhard, Victor H.
     7 <120> TITLE OF INVENTION: HA-1 epitopes and uses thereof
     9 <130> FILE REFERENCE: 2183-6047US
    11 <140> CURRENT APPLICATION NUMBER: 10/623,176A
    12 <141> CURRENT FILING DATE: 2003-07-18
     14 <150> PRIOR APPLICATION NUMBER: 09/489,760
    15 <151> PRIOR FILING DATE: 2000-01-21
    17 <150> PRIOR APPLICATION NUMBER: EP 97202303.0
    18 <151> PRIOR FILING DATE: 1997-07-23
    20 <150> PRIOR APPLICATION NUMBER: PCT/NL98/00424
    21 <151> PRIOR FILING DATE: 1998-07-23
    23 <150> PRIOR APPLICATION NUMBER: JP 2000-504165
    24 <151> PRIOR FILING DATE: 2000-01-24
    26 <160> NUMBER OF SEQ ID NOS: 101
    28 <170> SOFTWARE: PatentIn Ver. 2.1
    30 <210> SEQ ID NO: 1
     31 <211> LENGTH: 9
     32 <212> TYPE: PRT
    33 <213> ORGANISM: Artificial Sequence
    35 <220> FEATURE:
     36 <223> OTHER INFORMATION: Description of Artificial Sequence: HA-1 peptide
             wherein X can be R or H
    39 <220> FEATURE:
     40 <221> NAME/KEY: SITE
     41 <222> LOCATION: (1)..(9)
     43 <400> SEQUENCE: 1
W--> 44 Val Leu Xaa Asp Asp Leu Leu Glu Ala
     45
        1
     48 <210> SEQ ID NO: 2
     49 <211> LENGTH: 9
     50 <212> TYPE: PRT
    51 <213> ORGANISM: Artificial Sequence
    53 <220> FEATURE:
    54 <223> OTHER INFORMATION: Description of Artificial Sequence: HA-1 peptide
    56 <220> FEATURE:
    57 <221> NAME/KEY: SITE
    58 <222> LOCATION: (1)..(9)
    60 <400> SEQUENCE: 2
    61 Val Leu His Asp Asp Leu Leu Glu Ala
    62 1
    65 <210> SEQ ID NO: 3
```

DATE: 01/13/2006

TIME: 08:47:49

```
Input Set : A:\2183-6047 seq list.txt
                     Output Set: N:\CRF4\01132006\J623176A.raw
     66 <211> LENGTH: 9
     67 <212> TYPE: PRT
     68 <213> ORGANISM: Artificial Sequence
    70 <220> FEATURE:
    71 <223> OTHER INFORMATION: Description of Artificial Sequence: HA-1 peptide
              wherein X can be R or H
    74 <220> FEATURE:
     75 <221> NAME/KEY: SITE
     76 <222> LOCATION: (1)..(9)
    78 <400> SEQUENCE: 3
W--> 79 Lys Glu Cys Val Leu Xaa Asp Asp Leu
    80 1
     83 <210> SEQ ID NO: 4
     84 <211> LENGTH: 9
     85 <212> TYPE: PRT
     86 <213> ORGANISM: Artificial Sequence
     89 <220> FEATURE:
     90 <223> OTHER INFORMATION: Description of Artificial Sequence: HA-1 peptide
     92 <220> FEATURE:
     93 <221> NAME/KEY: SITE
     94 <222> LOCATION: (1)..(9)
     96 <400> SEQUENCE: 4
     97 Lys Glu Cys Val Leu His Asp Asp Leu
     101 <210> SEQ ID NO: 5
     102 <211> LENGTH: 9
     103 <212> TYPE: PRT
     104 <213> ORGANISM: Artificial Sequence
     106 <220> FEATURE:
     107 <223> OTHER INFORMATION: Description of Artificial Sequence: HA-1 peptide
     109 <220> FEATURE:
     110 <221> NAME/KEY: SITE
     111 <222> LOCATION: (1)..(9)
     113 <400> SEQUENCE: 5
     114 Lys Glu Cys Val Leu Arg Asp Asp Leu
     115
         1
     118 <210> SEQ ID NO: 6
     119 <211> LENGTH: 10
     120 <212> TYPE: PRT
     121 <213> ORGANISM: Artificial Sequence
     123 <220> FEATURE:
     124 <223> OTHER INFORMATION: Description of Artificial Sequence: HA-1 peptide
     126 <220> FEATURE:
     127 <221> NAME/KEY: SITE
     128 <222> LOCATION: (1)..(10)
     130 <400> SEQUENCE: 6
     131 Lys Glu Cys Val Leu His Asp Asp Leu Leu
     135 <210> SEQ ID NO: 7
```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/623,176A

RAW SEQUENCE LISTING DATE: 01/13/2006 PATENT APPLICATION: US/10/623,176A TIME: 08:47:49

Input Set : A:\2183-6047 seq list.txt
Output Set: N:\CRF4\01132006\J623176A.raw

```
136 <211> LENGTH: 10
    137 <212> TYPE: PRT
    138 <213> ORGANISM: Artificial Sequence
    140 <220> FEATURE:
    141 <223> OTHER INFORMATION: Description of Artificial Sequence: HA-1 peptide
    143 <220> FEATURE:
    144 <221> NAME/KEY: SITE
    145 <222> LOCATION: (1)..(10)
    147 <400> SEQUENCE: 7
     148 Lys Glu Cys Val Leu Arg Asp Asp Leu Leu
    149 1
                           5
    152 <210> SEQ ID NO: 8
    153 <211> LENGTH: 10
    154 <212> TYPE: PRT
     155 <213> ORGANISM: Artificial Sequence
     157 <220> FEATURE:
     158 <223> OTHER INFORMATION: Description of Artificial Sequence: HA-1 peptide
     159 wherein X can be R or H
     161 <220> FEATURE:
     162 <221> NAME/KEY: SITE
     163 <222> LOCATION: (1)..(10)
     165 <400> SEQUENCE: 8
W--> 166 Lys Glu Cys Val Leu Xaa Asp Asp Leu Leu
     167
                           5
     170 <210> SEQ ID NO: 9
     171 <211> LENGTH: 10
     172 <212> TYPE: PRT
     173 <213> ORGANISM: Artificial Sequence
     175 <220> FEATURE:
     176 <223> OTHER INFORMATION: Description of Artificial Sequence: peptide
           capable of binding HLA-A2.1
     179 <220> FEATURE:
     180 <221> NAME/KEY: SITE
     181 <222> LOCATION: (1)..(10)
     183 <400> SEQUENCE: 9
     184 Phe Leu Pro Ser Asp Cys Phe Pro Ser Val
     185 1
                          5
     188 <210> SEQ ID NO: 10
     189 <211> LENGTH: 9
     190 <212> TYPE: PRT
     191 <213> ORGANISM: Artificial Sequence
     193 <220> FEATURE:
     194 <223> OTHER INFORMATION: Description of Artificial Sequence: HA-1 peptide
     196 <220> FEATURE:
     197 <221> NAME/KEY: SITE
     198 <222> LOCATION: (1)..(9)
     200 <400> SEQUENCE: 10
     201 Val Leu Arg Asp Asp Leu Leu Glu Ala
     202
```

DATE: 01/13/2006

TIME: 08:47:49

Input Set : A:\2183-6047 seq list.txt Output Set: N:\CRF4\01132006\J623176A.raw 205 <210> SEQ ID NO: 11 206 <211> LENGTH: 9 207 <212> TYPE: PRT 208 <213> ORGANISM: Artificial Sequence 210 <220> FEATURE: 211 <223> OTHER INFORMATION: Description of Artificial Sequence: HLA-A3 binder positive control peptide 212 214 <220> FEATURE: 215 <221> NAME/KEY: SITE 216 <222> LOCATION: (1)..(9) 218 <400> SEQUENCE: 11 219 Lys Gln Ser Ser Lys Ala Leu Gln Arg 220 1 223 <210> SEQ ID NO: 12 224 <211> LENGTH: 9 225 <212> TYPE: PRT 226 <213> ORGANISM: Artificial Sequence 228 <220> FEATURE: 229 <223> OTHER INFORMATION: Description of Artificial Sequence: HLA-B60 binder positive control peptide 232 <220> FEATURE: 233 <221> NAME/KEY: SITE 234 <222> LOCATION: (1)..(9) 236 <400> SEQUENCE: 12 237 Lys Glu Ser Thr Leu His Leu Val Leu 238 1 241 <210> SEQ ID NO: 13 242 <211> LENGTH: 9 243 <212> TYPE: PRT 244 <213> ORGANISM: Artificial Sequence 246 <220> FEATURE: 247 <223> OTHER INFORMATION: Description of Artificial Sequence: sequence revealed from peptide candidate m/z 550 wherein X 249 can be I or L 251 <220> FEATURE: 253 <221> NAME/KEY: SITE 254 <222> LOCATION: (1)..(9) 256 <400> SEQUENCE: 13 W--> 257 Tyr Xaa Thr Asp Arg Val Met Thr Val 258 1 261 <210> SEQ ID NO: 14 262 <211> LENGTH: 9 263 <212> TYPE: PRT 264 <213> ORGANISM: Artificial Sequence 266 <220> FEATURE: 267 <223> OTHER INFORMATION: Description of Artificial Sequence: sequence of peptide candidate m/z 513 wherein X can be L or I 270 <220> FEATURE: 271 <221> NAME/KEY: SITE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/623,176A

DATE: 01/13/2006

```
TIME: 08:47:49
                     PATENT APPLICATION: US/10/623,176A
                     Input Set : A:\2183-6047 seq list.txt
                     Output Set: N:\CRF4\01132006\J623176A.raw
     272 <222> LOCATION: (1)..(9)
     274 <400> SEQUENCE: 14
W--> 275 Val Xaa His Asp Asp Xaa Xaa Glu Ala
    276
     279 <210> SEQ ID NO: 15
    280 <211> LENGTH: 8
     281 <212> TYPE: PRT
     282 <213> ORGANISM: Artificial Sequence
    284 <220> FEATURE:
    285 <223> OTHER INFORMATION: Description of Artificial Sequence: HA-1 peptide
     287 <220> FEATURE:
     288 <221> NAME/KEY: SITE
     289 <222> LOCATION: (1)..(8)
     291 <400> SEQUENCE: 15
     292 Val Leu His Asp Leu Leu Glu Ala
     293
         1
     296 <210> SEQ ID NO: 16
     297 <211> LENGTH: 25
     298 <212> TYPE: DNA
     299 <213> ORGANISM: Artificial Sequence
     301 <220> FEATURE:
     302 <223> OTHER INFORMATION: Description of Artificial Sequence: reverse primer
     304 <220> FEATURE:
     305 <221> NAME/KEY: misc_feature
     306 <222> LOCATION: (1)..(25)
     308 <400> SEQUENCE: 16
                                                                            25
     309 gctcctqcat gacgctctgt ctgca
     312 <210> SEQ ID NO: 17
     313 <211> LENGTH: 24
     314 <212> TYPE: DNA
     315 <213> ORGANISM: Artificial Sequence
     317 <220> FEATURE:
     318 <223> OTHER INFORMATION: Description of Artificial Sequence: HA-1 (I)
               forward primer
     321 <220> FEATURE:
     322 <221> NAME/KEY: misc_feature
     323 <222> LOCATION: (1)..(24)
     325 <400> SEQUENCE: 17
                                                                            24
     326 gacgtcgtcg aggacatctc ccat
     329 <210> SEQ ID NO: 18
     330 <211> LENGTH: 25
     331 <212> TYPE: DNA
     332 <213> ORGANISM: Artificial Sequence
     334 <220> FEATURE:
     335 <223> OTHER INFORMATION: Description of Artificial Sequence: reverse primer
     337 <220> FEATURE:
     338 <221> NAME/KEY: misc feature
     339 <222> LOCATION: (1)..(25)
     341 <400> SEQUENCE: 18
```

RAW SEQUENCE LISTING

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 01/13/2006
PATENT APPLICATION: US/10/623,176A TIME: 08:47:50

Input Set : A:\2183-6047 seq list.txt
Output Set: N:\CRF4\01132006\J623176A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

```
Seq#:1; Xaa Pos. 3
Seq#:3; Xaa Pos. 6
Seq#:8; Xaa Pos. 6
Seq#:13; Xaa Pos. 2
Seq#:14; Xaa Pos. 2,6,7
Seq#:24; Xaa Pos. 3
Seq#:25; N Pos. 23,24,25,26,27,28,29,30,31,32
Seq#:26; N Pos. 39
Seq#:33; Xaa Pos. 9
```

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

```
Seq#:79; Line(s) 1436
Seq#:80; Line(s) 1450
Seq#:81; Line(s) 1468
Seq#:82; Line(s) 1486
Seq#:83; Line(s) 1504
Seq#:84; Line(s) 1518
Seq#:85; Line(s) 1536
Seg#:86; Line(s) 1550
Seg#:87; Line(s) 1568
Seq#:89; Line(s) 1599
Seg#:90; Line(s) 1617
Seq#:91; Line(s) 1635
Seq#:92; Line(s) 1649
Seq#:93; Line(s) 1667
Seq#:94; Line(s) 1681
Seq#:95; Line(s) 1695
Seq#:96; Line(s) 1713
Seq#:97; Line(s) 1731
Seq#:98; Line(s) 1745
Seq#:99; Line(s) 1763
Seq#:100; Line(s) 1781
Seq#:101; Line(s) 1799
```

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/623,176A TIME: 08:47:50

DATE: 01/13/2006

Input Set : A:\2183-6047 seq list.txt
Output Set: N:\CRF4\01132006\J623176A.raw

L:44 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0
L:79 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
L:166 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0
L:257 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0
L:275 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0
L:442 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:0
L:460 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:0
L:477 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0
L:595 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:0